EYE DAMAGE DURING CHRONIC INFLAMMATORY RHEUMATISM

Abstract

Purpose: we report 40 cases of ophthalmological lesions observed in chronic inflammatory rheumatism to help improve the management of visual function. **Methods:** a prospective study was conducted at the Teaching University Hospital of Brazzaville from June 2016 to May 2017. These patients followed in Rheumatology department were oriented in Ophthalmology Department to assess ocular involvement, with chronic inflammatory rheumatism. **Results:** The pathologies involved were systemic lupus in 20 cases (50%), rheumatoid arthritis 10 cases (25%), spondyloarthropathy 6 cases (15%), scleroderma 2 cases (5%), juvenile arthritis idiopathic 1 case (2.5%) and Behçet's disease 1 case (2.5%).

Twenty-two patients (22) or 55% had ocular involvement. The lesions were unilateral in 14 cases, made of uveitis n=11 including 7 anterior, 3 posterior and 1 case of panuveitis, dry syndrome n = 8 with keratoconjunctivitis sicca (6 cases) and conjunctivitis sicca (2 cases), scleritis n=3. Three (3) cases of complicated cataract were associated with anterior uveitis. Seven patients had visual acuity less than or equal to 2/10 in at least one eye and 2 cases of bilateral blindness. **Conclusion:** Ocular lesions during rheumatic diseases are dominated by uveitis in its anterior form and are seen mainly in spondyloarthropathy, dry syndrome in rheumatoid arthritis. They can be silent and need to be detected and treated appropriately to prevent eye complications and sequelae.

Keywords: Chronic inflammatory rheumatism, ocular lesions, blindness

1. Introduction

Chronic inflammatory rheumatism has in common an inflammatory involvement of the connective tissue, thus a repercussion on the eye thus engaging the visual prognosis [1]. Some pathology is associated with uveitis such as spondyloarthropathy, Behçet's disease and juvenile idiopathic arthritis [2-4], dry syndrome and scleritis in rheumatoid arthritis [5]. All ocular tunics can be affected, thus defining the level of anatomical involvement that guides the etiological assessment. Genuine collaboration between internist and ophthalmologist is useful in the management of ocular lesions induced before the occurrence of complications. Chronic rheumatic pathology is common in our daily practice. So we proposed to

systematically look for ophthalmological lesions observed in chronic inflammatory rheumatism to help improve the management of visual function.

2. Materials and methods

A prospective study carried out at the Teaching University Hospital of Brazzaville from June 2016 to May 2017, in patients suffering from chronic inflammatory rheumatism and monitored in the Rheumatology department and oriented in Ophthalmology Department to evaluate ocular involvement. The usual criteria used in rheumatology have made it possible to diagnose rheumatic diseases. These patients were hospitalized or followed by an outpatient rheumatologist. Ophthalmologic examination was performed at least once for all patients by an ophthalmologist and included a measure of best corrected visual acuity, automatic tonometer eye tone, shirmer test, biomicroscopy. Baseline examination was eye after dilation with mydriatic eye drops at indirect ophthalmoscopy. Patients were followed for 6 months and reviewed at least 2 times. The data acquired have been the subject of a statistical treatment based on the χ test of Fisher.

3. Results

During the study period, 40 patients with chronic inflammatory rheumatism were examined. It was about 12 men and 28 women (sex-ratio equal to 0.42). The mean age was 40.82 years (range: 10-58 years). The main rheumatic diseases as well as the distribution of patients by age are shown in Table 1. The rheumatic diseases included systemic lupus in 20 cases (50%), rheumatoid arthritis 10 cases (25%), spondyloarthropathy 6 cases (15 %), scleroderma 2 cases (5%), juvenile idiopathic arthritis 1 case (2.5%) and Behçet's disease (2.5%).

Table 1: Distribution of rheumatic diseases

Rheumatic diseases	10-20 years n(%)	21-30 years n(%)	31-40 years n(%)	41-50 years n(%)	51-60years n(%)	Total n(%)
Systemic lupus		6(30)	10(50)	2(20)	2(20)	**20**
Rheumatoid arthritis		2(20)	3(30)	2(20)	3(30)	**10**
spondyloarthritis		1(16.7)	2(33.3)	2(33.3)	1(16.7)	**6**
scleroderma			2(100)			**2**
Juvenile idiopathic arthritis	1(100)					**1**
Behçet's disease				1(100)		**1**
Total	1(2.5)	9(22.5)	17(42.5)	7(17.5)	6(13)	**40**

There was no statistically significant relationship between age groups and pathologies found. Twenty-two (22) patients or 55% of cases had ocular involvement (table 2). The lesions were unilateral in 14 cases, made of uveitis in 11 cases including 7 previous, 3 posterior (dysoric retinitis n = 2 and papilledema 1 case) and panuveitis. A dry syndrome was found in 8 patients including keratoconjunctivitis sicca (n=6) and dry conjunctivitis (n = 2). Scleritis was noted 3 times. Uveitis was the most recovered lesion (n = 11) (table 3). Three cases of complicated cataract were associated with anterior uveitis. Seven patients had visual acuity less than or equal to 2/10 in at least one eye and 2 cases of bilateral blindness were noted at the time of the first examination.

Diseases rheumatic	**Ocular lesions**			**Total**
	Uveitis	Dry syndrome	Scleritis	
Systemic lupus	3	2		5
Rheumatoid arthritis		4	3	7
scleroderma		2		2
spondyloarthritis	6			6
Juvenile arthritis idiopathy	1			1
Behçet's disease	1			1
Total	**11**	**8**	3	**22**

Table 2: Ocular lesions

Table 3 : Distribution of Uveitis

Uvéites	antérieure	postérieure	panuvéite	Total
Spondylarthropathie	6			6
Lupus systémique		3		3
Arthrite juvénile idiopathique	1			1
Maladie de Behçet			1	1
Total	**7**	3	1	**11**

4. Discussion

Ocular involvement in chronic inflammatory rheumatism is common. The ophthalmologist may be confronted with these conditions not only at the stage where the rheumatological diagnosis is established, but also for the screening before inaugural ocular signs. Systemic lupus was the most observed connective tissue disease, accounting for half of the cases in young females, especially in the 21 to 40 age group. The ocular lesions found were posterior uveitis 3 cases, in the form of dysentery retinitis. Is an impairment of microcirculation with occlusion of retinal or choroidal arterioles [6] and papilledema. The dry syndrome found in 2 cases in our series also reported by Kahn et al [7] that attests that lupus represents only 5% of conditions associated with dry syndrome. Rheumatoid arthritis was the second pathology (10 cases). The lesions found were dry syndrome in 4 cases, 10% made of keratoconjunctivitis and dry conjunctivitis in 2 cases each. Heron [5] reports 15% scleritis and confirms that rheumatoid arthritis is responsible for dry syndrome, scleritis and keratitis. Spondyloarthropathy was noted in 6 cases, anterior uveitis was the only lesion found (15%). In the literature, uveitis is the most common cause in spondyloarthropathies, estimated at 50% to 90% of cases [8]. It is unilateral, recurrent in 50-60% and sometimes be the revealing element of systemic disease [9, 10]. Systemic scleroderma was found in 2 (5%) female patients aged 30 years and 48 years with keratoconjunctivitis sicca. Juvenile idiopathic arthritis was observed in one patient (2.5%) aged 10-year-old male with anterior uveitis. Many authors on large series claim the existence of anterior uveitis in relation to juvenile idiopathic arthritis as Kump et al 33% of cases [11], Ben Ezra 14.9% [12] and Chebil 6.2% [13]. Panuveitis was found in Behçet's disease. Chebil in Tunis [14] estimates that 14.7% of

uveitis is due to Behçet's disease. For Khairallah et al [15], uveitis during Behçet is the most frequent manifestation that constitutes an important diagnostic criterion and conditions the visual prognosis. We noted that uveitis was the most common pathology in chronic inflammatory rheumatism (27.5%) in its forms: anterior, posterior and total, with a predominance of anterior uveitis (17.5%). Cataract is the complication related to anterior uveitis and is seen especially during spondyloarthropathy. It is linked to the chronic inflammation that determines this condition [16] and also to the local and general corticotherapy instituted. The chronic inflammation that results from these rheumatic conditions endangers the visual function.

In addition, seven (7) patients had a visual acuity of less than 2/10 and presented with either lupus or rheumatoid arthritis that was complicating visual impairment due to corneal and scleral inflammation. The two cases of bilateral blindness are observed in spondyloarthropathy and Behçet's disease. The rate of blindness during the follow-up seems to correlate with the speed of the treatment, the diagnostic orientation, the adaptation of the treatment and the severity of the inflammatory attack [17]. Thus the rapid resolution of this inflammation, the prevention of relapses guarantee the preservation of vision. Management requires close collaboration between ophthalmologist rheumatologists and internists.

5. Conclusion

Ocular lesions during rheumatic diseases are common. They are dominated by uveitis in its anterior form and are seen mainly in spondyloarthropathies. The dry syndrome is found in rheumatoid arthritis. They may be silent, and must be detected and treated appropriately to prevent eye complications and sequelae.

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